

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान सेवा आयोग
प्राज्ञिक सेवा, आकस्मिक तथा जनरल प्राक्टिस समूह, Palliative Care उपसमूह, सहायक प्राध्यापक पद नौ ख (९
ख) तहको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

Paper II: Technical Subject

Section (A) - 45 Marks

(1 critical analysis Q -15 mark + 3 long Q- 30 marks)

Emergency and General Practice

1. **Applied Basic Sciences**
 - 1.1 Applied anatomy
 - 1.2 Applied Physiology
 - 1.3 Applied Pathology
 - 1.4 Applied Pharmacology
 - 1.5 Applied immunology
 - 1.6 Applied biostatics
 - 1.7 Applied research methods
 - 1.8 Applied Molecular biology and genetics
2. **Knowledge of outpatient department**
 - 2.1 Initial assessment with logical approach to undifferentiated illness.
 - 2.2 Impact of illness in the context of the family and community
 - 2.3 Sensitive to psychosocial issues related to presentation
 - 2.4 Basic diagnostics and management of chronic illness eg diabetes, hypertension, asthma, COPD, APD , anxiety/depression
3. **Medicine**
 - 3.1 Chest pain (acute and chronic)
 - 3.2 Palpitations
 - 3.3 Shortness of breath (acute, intermittent and chronic)
 - 3.4 Wheezing/Stridor
 - 3.5 Haemoptysis
 - 3.6 Cough
 - 3.7 Cyanosis
 - 3.8 Swelling of body parts
 - 3.9 Dyspepsia
 - 3.10 Reflux
 - 3.11 Haematemesis and malaena
 - 3.12 Upper and lower abdominal pain (acute and chronic)
 - 3.13 Diarrhoea
 - 3.14 Vomiting
 - 3.15 Abdominal distension
 - 3.16 Constipation
 - 3.17 jaundice
 - 3.18 Dysuria
 - 3.19 Haematuria
 - 3.20 Impotence

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- 3.21 Confusion
- 3.22 Coma
- 3.23 Headache
- 3.24 Convulsions
- 3.25 Syncope
- 3.26 paralysis
- 3.27 paraesthesia
- 3.28 Weakness
- 3.29 Fever
- 3.30 Anorexia
- 3.31 Fatigue
- 3.32 Myalgia
- 3.33 Itch
- 3.34 Rash
- 3.35 Abnormal bleeding
- 3.36 Swollen glands
- 3.37 Joint swelling
- 3.38 Joint pain
- 3.39 Thyroid disease
- 3.40 Diabetes
- 3.41 Tuberculosis
- 3.42 Drug related problem -iatrogenic, poisoning, or abuse including alcohol/smoking
- 3.43 Anaemia
- 3.44 Depression
- 3.45 Hypertension
- 3.46 Spinal dysfunction
- 3.47 Urinary tract infection
- 3.48 Holistic management of patients with HIV/AIDS
- 3.49 palliative care

4. **Paediatrics**

- 4.1 Acute Life Threatening Problems
 - 4.1.1 Stridor /Airway compromise (Croup/epiglottitis)
 - 4.1.2 Respiratory distress and potential respiratory failure (severe ARI, Asthma)
 - 4.1.3 Circulatory failure/shock including Sepsis and dehydration
 - 4.1.4 Altered Sensorium including Meningitis/ encephalitis / encephalopathies (hepatic, uraemic, hypertensive)
 - 4.1.5 Seizures and status epilepticus
 - 4.1.6 Congestive heart failure
 - 4.1.7 Supraventricular tachycardia
 - 4.1.8 Acute renal failure
 - 4.1.9 Bleeding disorders

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- 4.1.10 Diabetic Ketoacidosis
 - 4.1.11 Acute Abdominal Pain (distinguish medical and surgical causes)
 - 4.2 Common Febrile Illness
 - 4.2.1 ARI (including Pertussis)
 - 4.2.2 Diarrheal diseases (viral, bacterial, Parasitic)
 - 4.2.3 Urinary Tract Infection
 - 4.2.4 Septicemia/Bacteremia
 - 4.2.5 Enteric fever
 - 4.2.6 Acute tonsillitis
 - 4.2.7 Tuberculosis (TB)
 - 4.2.8 Infective hepatitis
 - 4.3 Cough - including Asthma/Bronchitis/Bronchiolitis
 - 4.4 Oedema-including renal (nephritic syndrome, nephritis), Kwashiorkor, cardiac
 - 4.5 Chronic abdominal pain
 - 4.6 Jaundice
 - 4.7 Seizure disorders
 - 4.8 Anemia and blood dyscrasias including Leukemias (recognize and refer)
 - 4.9 Arthritis (septic arthritis, osteomyelitis, Juvenile Rheumatoid arthritis)
 - 4.10 Skin disease/rashes (eg; scabies)
 - 4.11 Common eye problems (eg, conjunctivitis)
 - 4.12 Common ear problems (eg, otitis media)
 - 4.13 Dehydration
 - 4.14 Certain diseases can present in different ways, so specific attention should be paid to
 - 4.14.1 Diabetes mellitus
 - 4.14.2 Hypothyroidism
 - 4.14.3 TB
 - 4.14.4 HIV/AIDS
5. **Dermatology**
The general practice doctor will be able to manage the following common skin conditions:
- 5.1 Bacterial : Superficial bacterial infections, Skin TB , Leprosy
 - 5.2 Viral: Herpes simplex, Herpes Zoster, Wart, Molluscum contagiosum
 - 5.3 Fungal: Dermatophyte, Candida, Tinea versicolor, Deep Fungal infection
 - 5.4 Parasites: Scabies, Pediculosis, Leishmaniasis
 - 5.5 Approach : Systemic Causes
 - 5.5.1 Skin Causes – Infective (e.g. Scabies), Urticaria, Dermatitis Herpetiform, Lichen Planus
 - 5.6 Common Skin Problems: Eczema/Dermatitis, Acne, Psoriasis, Drug eruption, Erythema multiforme, Erythema , Nodosum, Purpura, Bullous diseases
 - 5.7 Skin Ulcers: Hair and Nail Disorders:
 - 5.7.1 Alopecia, Onycholysis, Paronychia
 - 5.7.2 Pigmented Skin Lesion including Melanoma.
 - 5.7.3 Common Lumps and Bumps including Skin Cancers:

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- 5.7.4 Warts, Keratoacanthoma, Basal Cell, Squamous Cell, Carcinoma
- 5.8 Sexually transmitted disease
 - 5.8.1 Clinical examination and investigation and basic treatment of STD
- 6. **Psychiatry**
 - 6.1 Anxiety including Panic and phobic disorders
 - 6.2 Depression
 - 6.3 Conversion/Dissociative disorder
 - 6.4 Psychosis
 - 6.5 Bipolar mood disorder
 - 6.6 Somatic presentations- including pseudo-seizures and multi- symptomatic patients
 - 6.7 Substance Related Disorder
 - 6.8 Concept and simple practice of non -pharmacological approaches to mental health problems
 - 6.9 Common conditions of Primary Care
 - 6.9.1 Anxiety
 - 6.9.2 Depression
 - 6.9.3 Somatic Presentation of mental distress
 - 6.9.4 Alcohol and substance misuse
 - 6.9.5 Chronic Tiredness
 - 6.9.6 Sleep disturbances
 - 6.10 Health Promotion and support in chronic mental illness
 - 6.10.1 Monitoring and follow- up in patient with chronic mental illness
 - 6.10.2 Social support for patient and their family
 - 6.10.3 Referral to appropriate specialist care
 - 6.11 Stage of life issues
 - 6.11.1 Adjustment disorders and chronic physical illness, disability
 - 6.11.2 Dementia
 - 6.11.3 Dying and bereavement
- 7. **Emergency Medicine**
 - 7.1 Develops systematic approach to undifferentiable presentation (unconscious patients, chest pain; abdominal pain, dyspnea, etc.)
 - 7.2 Organize and manage emergency services
 - 7.3 Use emergency equipment and supplies available in Nepal
 - 7.4 Develop knowledge about the Emergency Drugs particularly analgesia
- 8. **Anaesthesia**
 - 8.1 Local anesthesia and regional blocks
 - 8.2 Pain management Intravenous fluid management(Pre and post surgery)
 - 8.3 Airway management using facemask, oral airway and intubation
 - 8.4 Regional anesthetic blocks, spinal, epidural and peripheral

9. Surgery

9.1 Skin and subcutaneous tissue

- 9.1.1 Diagnosis and management of inflammatory condition of skin like cellulites, boils, carbuncle, etc.
- 9.1.2 Diagnosis and excision of sebaceous cysts, lipomas, etc
- 9.1.3 Diagnosis and management of squamous cell carcinoma, basal cell carcinoma and malignant melanoma

9.2 Burns

9.3 Lymph Nodes

- 9.3.1 Describe the differential diagnosis of lymph node enlargement

9.4 Arterial disorders

- 9.4.1 Diagnose acute limb ischaemia
- 9.4.2 Diagnose and manage dry gangrene
- 9.4.3 Diagnose and manage DVT

9.5 Salivary gland

- 9.5.1 Diagnosis and management of parotid and submandibular abscess
- 9.5.2 Differential diagnosis of parotid and submandibular lump
- 9.5.3 Differential diagnosis of parotid and submandibular lump (biopsy is inappropriate)

9.6 Thyroid

- 9.6.1 Differential diagnosis of solitary thyroid nodule
- 9.6.2 Features of nodular goiter, its complications and indications for surgery
- 9.6.3 Features of thyrotoxicosis, its complications and indications for surgery
- 9.6.4 Management of hypothyroidism

9.7 Breast

- 9.7.1 Method of Breast self examination
- 9.7.2 Differential diagnosis of breast lump
- 9.7.3 Triple investigation
- 9.7.4 Principles of management of breast carcinoma
- 9.7.5 Differential diagnosis of nipple discharge and indication for surgery
- 9.7.6 Breast pain

9.8 Upper GI Tract

- 9.8.1 Dysphagia : differential diagnosis, Investigations required
- 9.8.2 Principle of management of oesophageal carcinoma,
- 9.8.3 Gastro-oesophageal reflux disease: medical management
- 9.8.4 Peptic ulcer disease: symptomatology, indications for endoscopy, medical management, complications and indications for surgery.
- 9.8.5 Management of Ulcer GI Bleeding
- 9.8.6 Management of Gastric carcinoma (Operative details not required)

9.9 Hepatobiliary

- 9.9.1 Jaundice : Pathophysiology, differential diagnosis
- 9.9.2 Liver abscess
- 9.9.3 Tumors of liver : differential diagnosis

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- 9.9.4 Gallstone disease and its complications
- 9.10 **Pancreas**
 - 9.10.1 Acute pancreatitis: aetiology, definitions of mild and severe pancreatitis, management, complications and indications for surgery
 - 9.10.2 Chronic pancreatitis
- 9.11 **Small Intestine**
 - 9.11.1 Features of small bowel obstruction, its differential diagnosis and management
 - 9.11.2 Appendicitis, appendicular mass and appendicular diagnosis abscess
- 9.12 **Large bowel/Rectum and Anal Canal**
 - 9.12.1 Features of large bowel obstruction and its differential diagnosis
 - 9.12.2 Bleeding per rectum, differential diagnosis
 - 9.12.3 Hemorrhoids including complications
 - 9.12.4 Perianal abscess
- 9.13 **Hernia**
 - 9.13.1 Acute urinary retention
 - 9.13.2 Kidney Infection
 - 9.13.3 Scrotal swelling: differential diagnosis and investigation
- 10. **Orthopaedics**
 - 10.1 Non- Traumatic condition:
 - 10.1.1 Infective condition : Most important, Acute infection: Acute osteomyelitis; Acute septic arthritis; Chronic osteomyelitis; Tubercular infections including spine
 - 10.1.2 Degenerative condition and office orthopaedics
 - 10.2 Approach to diagnosis and conservative management where possible, with referral if possible and benefit from orthopedic consultation.
 - 10.2.1 Osteoarthritis
 - 10.2.2 Gout/Pseudogout
 - 10.2.3 Acute and Chronic low back and cervical pain
 - 10.2.4 Regional Musculo-skeletal condition Shoulder, Elbow, Wrist, Hip, Knee, Ankle
 - 10.3 Other Rarer Condition
 - 10.3.1 Congenital Deformities
 - 10.3.2 Neoplastic condition
 - 10.3.3 Metabolic and other condition
 - 10.3.4 Auto-immune diseases
- 11. **Obstetrics & Gynaecology**
- 12. **Family Planning**
- 13. **Ultrasound**
 - 13.1 The different components of Ultrasound equipment and their function
 - 13.2 Take proper care of the Ultrasound equipment including sterilization of transducers

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- 13.3 Identify artifacts and their usefulness and those that degrade the ultrasounds image
 - 13.4 The ultrasound orientation of the image, scanning techniques and preparation of the patients
 - 13.5 Identify key obstetrics, medical and surgical condition on ultrasound
14. **Dentistry**
- 14.1 common dental diseases
 - 14.2 Manage common dental problems
 - 14.3 Recognize and manage acute dental and periodontal conditions.
 - 14.4 Temporo- mandibular joint dislocation
 - 14.5 Post dental extraction bleeding
 - 14.6 Gingivitis
 - 14.7 Periodontitis
 - 14.8 Dental caries
 - 14.9 Precancerous condition

Section (B) - 55 Marks
(1 critical analysis Q -15 marks + 4 long Q -40 marks)
Palliative Care

- 1. Introduction**
 - 1.1 Principles of Palliative Care
 - 1.2 WHO definition
 - 1.3 History of Palliative care
 - 1.4 Global situation of palliative care
 - 1.5 End of life care
- 2. Ethical issues in palliative care**
 - 2.1 Principles of ethical decision making
 - 2.2 Giving iv fluids/ non-enteral nutrition
 - 2.3 Prognostication (" How long I have left?")
 - 2.4 Collusion
 - 2.5 Resuscitation
 - 2.6 Competence/ capacity
 - 2.7 Euthanasia/ physician assisted suicide
- 3. Communication in palliative care**
 - 3.1 Aims of good therapeutic communication
 - 3.2 Barriers to effective communication
 - 3.3 Breaking Bad news
 - 3.4 Handling difficult questions
 - 3.5 Talking about death and dying
- 4. Pain management**

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- 4.1 Concept of total pain
- 4.2 Classification of physical pain
- 4.3 Assessment of pain
- 4.4 Principles of pain management
- 4.5 Analgesic: non-opioids
 - Opioids : drugs, dosing, toxicity, switching
- 4.6 Analgesic for neuropathic pain
- 4.7 Non-pharmacological methods of pain management
- 5. Gastrointestinal symptoms**
 - 5.1 Oral problems
 - 5.2 Nausea and vomiting
 - 5.3 Constipation
 - 5.4 Diarrhea
 - 5.5 Intestinal obstruction
 - 5.6 Hiccup
 - 5.7 Anorexia/cachexia
 - 5.8 Ascitis
 - 5.9 Bowel stoma care
 - 5.10 GI Bleeding
- 6. Respiratory symptoms**
 - 6.1 Breathlessness
 - 6.2 Cough
- 7. Mental symptoms**
 - 7.1 Anxiety
 - 7.2 Depression
- 8. Management of Non-malignant disease in palliative care**
- 9. Emergencies in palliative care**
 - 9.1 Extreme pain
 - 9.2 Extreme breathlessness
 - 9.3 Spinal cord compression
 - 9.4 Superior vancaval syndrome
 - 9.5 Hypercalcaemia of malignancy
 - 9.6 Situational emergencies
- 10. End of life care**
 - 10.1 Principles of “dying well”
 - 10.2 Care in the last forty-eight hours
- 11. Wound care**
- 12. Skin care**

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13. Oral care

14. Care of the caregivers

Following pattern will be used for formation of paper I & II as far as possible.

Paper I				
Part	Section	Weightage	No. Questions & Weightage	
			Objective Multiple Choice	Subjective
I	A	20		2 Questions X 10 Mark = 20
	B	30		3 Questions X 10 Mark = 30
II	C	25	25 Questions X 1 Mark = 25	
	D	25	25 Questions X 1 Mark = 25	
Paper II				
Section	Weightage	No. Questions & Weightage		
		Long answer	Critical Analysis	
A	45	3 Questions X 10 Mark = 30	1 Questions X 15 Mark = 15	
B	55	4 Questions X 10 Mark = 40	1 Questions X 15 Mark = 15	
